



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,800	12/06/2000	Kuniya Kaneko	032218-011	8148

7590 10/04/2005

Platon N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

GRAYSAY, TAMARA L

ART UNIT	PAPER NUMBER
----------	--------------

3623

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Mc

Office Action Summary

Application No.

09/729,800

Applicant(s)

KANEKO ET AL.

Examiner

Tamara L. Graysay

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005 and 12 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 30-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 36-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date (<u>1 page</u>). | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objection

1. Claims 16 and 29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Upon review of the application papers, the record reveals that applicant intended for claims 16 and 29 to be considered as dependent claims because thirty-five total claims including seven independent claims (1, 8, 17, 28, 30, 31, and 34) were paid for when the application was filed. Therefore, claims 16 and 29 have been treated as dependent claims. As such, they are in improper dependent form.

The test as to whether a claim is a proper dependent claim is that it shall include every limitation of the claim from which it depends, i.e., it shall not conceivably be infringed by anything that could not also infringe the base claim.

Claims 8 and 28 recite a demand-supply scheme planning method and claims 16 and 29 recite a computer-readable medium storing a program to perform the method steps in claims 8 and 28, respectively. The dependency is not proper since it is conceivable that the claims drawn to a computer-readable medium can be infringed without infringing the respective base method claim because the computer-readable medium can be in possession of someone and be used without infringing the base method claim. For example, possession of the computer-readable medium does not require fully performing all aspects of the program stored thereon. In other words, having possession of the computer readable medium but not implementing the

Art Unit: 3623

functionality of the program stored thereon or implementing only some of the program stored thereon. The steps of a method must be performed for infringement of the base claims 8 and 28, respectively. In contrast, even though one may be in possession of a computer-readable medium having a program to perform the method, the steps do not have to be performed in order to infringe the claim drawn to the computer-readable medium.

Therefore, each dependent computer-readable medium claim may conceivably be infringed without infringing its respective base method claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 8-14, 28, 37, and 39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test: (1) whether the invention is within the technological arts; and (2) whether the invention produces a useful, concrete, and tangible result.

As to the second prong, for a claimed invention to be statutory the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention includes calculating a profitability index of a supply chain and setting scheme data so as to increase the profitability index.

As to the first prong, for a claimed invention to be statutory the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the “progress of science and the useful arts” (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, even though a practical application of setting scheme data so as to increase the profitability index of the supply chain is recited in the process claims, the claimed process lacks a tie to any technological art. In other words the process claims do not recite any limitations that involve a technology, and the claimed process steps do not require use

Art Unit: 3623

of any technology to implement the invention. For example, a human being, using pencil and paper can manually perform the steps.

The limitation added to the preamble does not obviate the rejection. The weight given the preamble of a claim is dependent upon whether the body of the claim breathes life and meaning into the preamble. In this case, the body of the claim does not further recite any structure of a computer that is manipulated by the method steps. Further, the preamble as amended is merely a statement of the intended field of endeavor rather than a limitation having patentable weight.

In conclusion, the process claims meet the second prong of the two-prong test because they produce a useful, concrete, and tangible result, however, they do not meet the first prong because they are not within a technological art, as explained above. Therefore, process claims 8-14, 28, 37 and 39 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-11, 13-17, 19-29 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly (US-5787000) in view of Sellers (US-5311438).

a. Regarding claim 1, Lilly discloses a computerized demand-supply scheme planning apparatus comprising:

- i. first means for storing data (means for receiving data in a computer c.3, 1.31-43, the data includes material, and other inherent costs, and date/time constraints);
- ii. second means for inputting an order receipt scheme (work order c.4, 1.39-44;
- iii. third means for determining scheme data based on order receipt scheme data and a predetermined parameter (manufacturing process data related to orders received, products produced and supplied, product availability, e.g., c.4, 1.34-38, c.5, 1.24 to c.6, 1.25); and,
- iv. fifth means for changing the parameter (resource and material availability are parameters that change, for example, the global scheduling system includes means for changing the priority of work orders based on the assigned finish date/time c.9, 1.1-25).

Lilly lacks the fourth and sixth means. Sellers teaches a financial analysis that includes means for calculating a profitability index (a basic financial parameter, such as the profitability index, c.113, l.31 to c.114, l.47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lilly to include means for calculating a profitability index, such as suggested by Sellers, in order to perform a financial analysis. Also, the examiner notes that Lilly discloses means for determining the “best fit” for each work order (c.2, l.41-44) implying that the work order would be met using a scheme that best suits the business. The examiner takes official notice that it is well known in for-profit business that increased profit is a primary business goal. Therefore, it would have been obvious to further modify the Lilly and Sellers combination to include a system that maximizes the profitability index because a maximized profitability index means that the scheme is worth more than the initial cost thereby increasing profits of the company implementing the apparatus.

- b. Regarding claims 8, 15 and 16, the above combination as applied to claim 1 discloses a method, computer, and storage device.
- c. Regarding claims 2 and 9, Lilly discloses means for storing product and part data (material data c.5, l.43-54).
- d. Regarding claims 3 and 10, Lilly discloses a service, as broadly recited, insofar as the manufacturer is providing the items requested in the work order to the customer.
- e. Regarding claims 4 and 11, Lilly discloses an actual work order placed, and the scheme is based on receipt of the order (work order information c.5, l.55-67), stock

amount (material requirements c.6, l.50-64); and target stock amount (material availability c.6, l.66 to c.7, l.5).

f. Regarding claims 6, 7, 13, and 14, Lilly discloses storing an order receivable amount and determining a scheme based on the order receivable amount (work order for manufacturing products in a manufacturing process based on the start date/time and finish date/time together with the resource and material requirements for the work order c.2, l.33-40).

g. Regarding claims 17 and 19-29, the rejection applied to the above claims is applied to these claims as well. Additionally, the examiner notes that Lilly discloses the use of suppliers as a resource material (c.4, l.1-7). The examiner takes official notice that the costs associated with manufacturing a product or subassembly would inherently include transportation or shipment costs for each step in a manufacturing process. For example, a scheme for a business that manufactures a product that requires raw materials or sub-parts would take into consideration the time (shipping from the supplier to the manufacturer and from the manufacturer to the purchaser) and costs (freight, insurance, etc.) associated with obtaining raw materials or sub-parts included in the assembly of the product to be provided to the purchaser.

h. Further, regarding claim 27, Lilly discloses a means for displaying information generated by the apparatus.

i. Regarding claims 36-39, the examiner takes Official notice that applying financial analysis to part or all of a business process is a well known business strategy. In particular, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the supply chain analysis of the Lilly and Sellers combination to include a “whole” supply chain since it is well-known in business to apply financial analysis techniques to part or all of a business process.

4. Claims 5, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly (US-5787000) and Sellers (US-5311438) as applied to claims 4, 11, and 17, respectively, above, and further in view of Edstrom (US5233533).

Lilly, as modified by Sellers, discloses the use of means for determining the amount of materials needed for each work order and prioritizing the work based on a linear or global scheduling scheme. The scheduling system exchanges information with the material system so that materials needed at a certain date/time are available. Edstrom teaches an allocation of inventory so as to determine a target amount (net amount available c.14, 1.62 to c.15, 1.6) on a daily basis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Lilly-Sellers combination to include a target stock as the parameter that is changed when determining the scheme that maximizes the profitability index, such as suggested by Edstrom’s daily computation of the available stock amount, in order to ensure that the stock amount is not below a desired level based on projected or historical work order information.

Response to Arguments

5. Applicant's arguments filed 30 March 2005 have been fully considered but they are not persuasive.

In response to applicant's argument of 30 March 2005 at pages 26-28 that the combination of Lilly and Sellers would "merely suggest" to estimate the cost of a new product and schedule work orders to manufacture the product, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In the rejection above, the combination of Lilly and Sellers would have been obvious in that Sellers clearly discusses profitability index as a basic financial parameter. To apply such a parameter or means to the Lilly process would have been obvious as noted in the rejection above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. ***

- Crittenden (article, Close the marketing/manufacturing gap) teaches eighteen rules for making capacity allocation decisions and their relationship to profit (p.3-4). Also, Crittenden teaches using a model to determine a profitability index based on the profit impact of a rule as it is applied to a process in the marketing and manufacturing arenas (p.7-9). The rules include order receipt and filling (p.8), capacity (p.9).
- Oil and Gas Journal (article, Global petrochemical industry experiencing cyclic downturn) teaches the use of profitability index to track demand-supply chain in the petrochemical industry.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

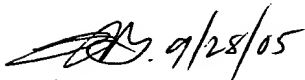
Art Unit: 3623

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara L. Graysay whose telephone number is (571) 272-6728. The examiner can normally be reached on Mon - Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 9/28/05

tlg
20050928


TARIQ B. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600